

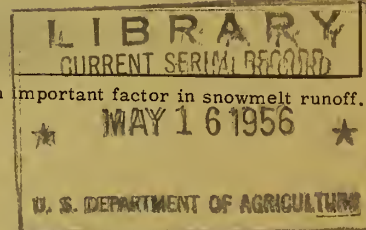
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Checking Mountain Soil Moisture Under the Snow, an important factor in snowmelt runoff.



Federal-State Cooperative
Snow Surveys and Water Supply Forecasts
for
OREGON

SOIL CONSERVATION SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE
AND
OREGON AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U.S. Forest Service, National Park Service and other Federal, State and local organizations.

— AS OF —
MAY 1, 1956

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY
AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the West are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its co-operators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section
Soil Conservation Service
209 S. W. 5th Avenue
Portland 4, Oregon

BASIN REPORTS:

Colorado, Rio Grande,.. Issued monthly February through May by SCS and
and Platte-Arkansas Colorado Experiment Station, Fort Collins, Colorado.*
River Basins

Columbia River..... Issued monthly January through May by Soil Conserva-
Basin tion Service, Boise, Idaho.*

Upper Missouri..... Issued monthly February through May by SCS and
River Basin Montana Agricultural Experiment Station, Bozeman,
Montana.*

West-Wide Water..... Issued April 1 by Soil Conservation Service and
Supply Outlook Cooperators, Portland, Oregon.

STATE REPORTS:

Arizona..... Issued semi-monthly January 15 through April 1 by SCS
and Salt River Valley Water Users Association, Phoenix,
Arizona.*

Nevada..... Issued monthly February through April by SCS and
Nevada State Engineer, Reno, Nevada.*

Oregon..... Issued monthly January through May by SCS, Portland,
Oregon, and Oregon Agricultural Experiment Station.*

Utah..... Issued monthly January through May by SCS, Salt Lake
City, Utah, and State Engineer of Utah and Utah Agri-
cultural Experiment Station.*

Washington..... Issued monthly February through May by SCS, Spokane,
Washington, and State Department of Conservation and
Development.*

Wyoming..... Issued monthly February through May by SCS, Casper,
Wyoming, and State Engineer of Wyoming.*

*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Buildings, Victoria, B.C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacramento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States" may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

FEDERAL-STATE COOPERATIVE
SNOW SURVEYS AND WATER SUPPLY FORECASTS
FOR
OREGON

Issued
May 8, 1956

Report Prepared
by
W. T. Frost, Snow Survey Supervisor
and
Manes Barton, Assistant Water Forecaster

Soil Conservation Service
and
Oregon Agricultural Experiment Station
209 S. W. 5th Avenue
Portland 4, Oregon

Issued by:

Harold E. Tower
State Conservationist
Soil Conservation Service

F. Earl Price
Director
Oregon Agricultural Experiment Station

WATER SUPPLY OUTLOOK

1.

FOR OREGON

MAY 1, 1956

Water supplies for Oregon's agriculture have shifted away from the "rosy" picture of a month ago due primarily to the record-low precipitation and abnormally high temperatures of April. As a result, late summer flows on the smaller streams and those with watersheds of moderate elevations will definitely be short.

SNOW-COVER: April storms have been few in number and widely scattered and have increased the snow-pack only at the highest elevations. All of the low-elevation snow has been melted and the abnormally high April temperatures have greatly depleted the snow at moderate elevations. May 1 snow surveys show above normal snow-cover only on high watersheds.

SOIL-MOISTURE: Watershed soils in the high mountain areas are all extremely wet. At moderate elevations the soils are dry on the surface but well wet underneath. Valley soils are relatively dry and in need of adequate rain except where irrigated.

RESERVOIRED WATER: Stored water in 20 irrigation reservoirs is 24 percent above average and 52 percent greater than last year at this date. Most storage structures are comfortably filled or spilling.

PRECIPITATION: April precipitation¹ averaged about 55 percent in the State ranging from 10 percent average in the Lower Columbia area to 136 percent in the South Central area.

STREAMFLOW: Forecasts for seasonal flow have been reduced from 5 to 15 percent throughout the State due to the abnormally warm dry weather experienced in April.

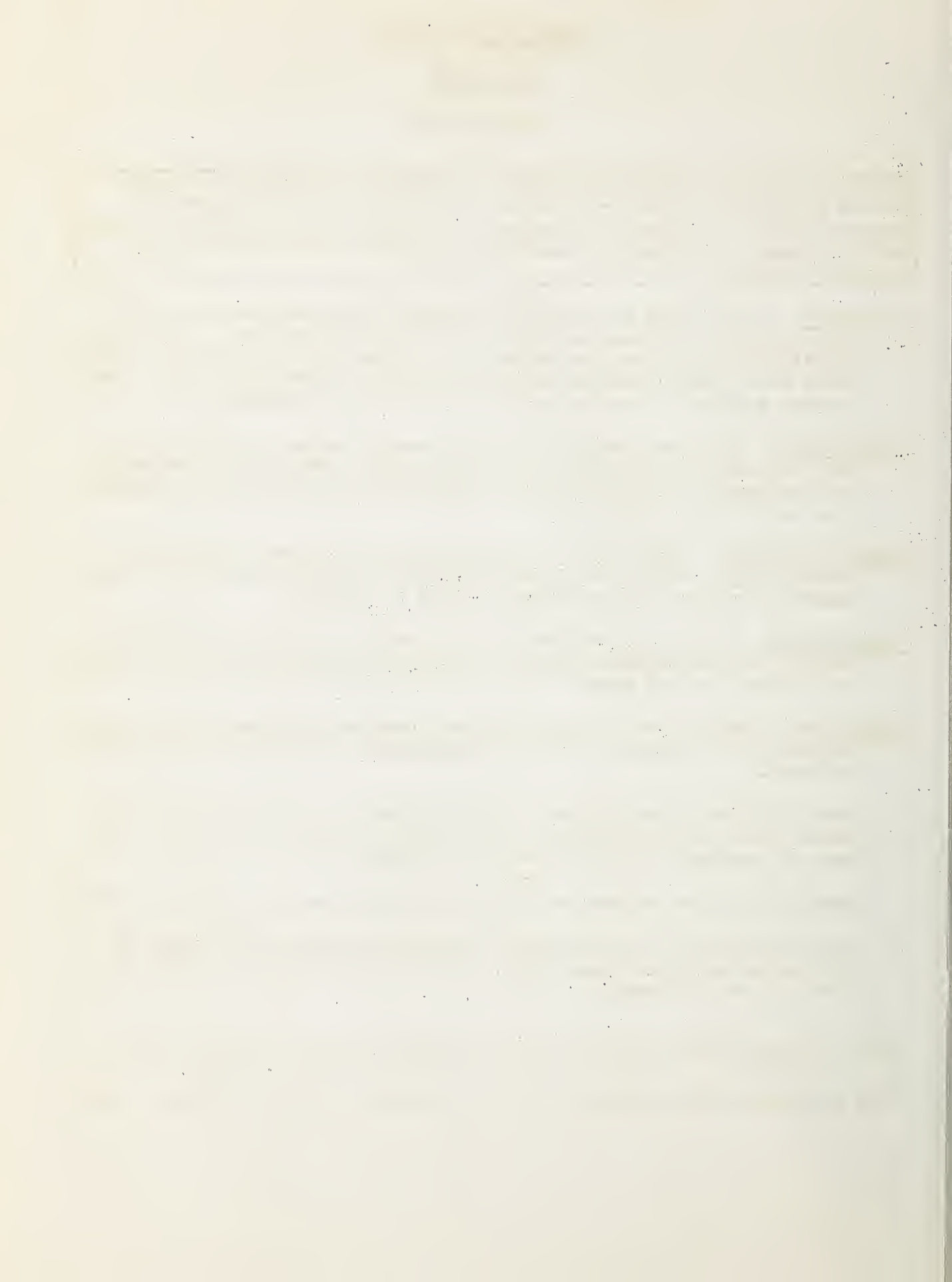
Water supplies for agriculture will be adequate in most places but late summer flows will be deficient in the smaller streams and in those that head in watersheds with only moderate elevations.

Lands served from reservoird supplies have good water supplies in sight.

April streamflow² has varied from 71 percent average on the Owyhee to 235 percent on Upper Klamath Lake. Flow of the Willamette at Salem has been 126 percent average.

¹From preliminary data furnished by U. S. Weather Bureau, Portland, Oregon.

²From preliminary data furnished by U. S. Geological Survey, Portland, Oregon.



The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature during the forecast period will be near average. Appreciable deviations from normal of temperature and/or precipitation during the forecast period will correspondingly modify these forecasts

Basin, Stream and Station	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1956	% 15-Yr. Avg.	Fore- cast Period	Measured 1954	Runoff* 1953	15 - Yr. Average 1938-52
Columbia River nr. The Dalles**	129,000.0	133	Apr-Sept.	116986.0	99800.0	97006.0
UPPER COLUMBIA BASIN LOWER SNAKE IN OREGON						
<u>Owyhee River Basin</u>						
Owyhee Reservoir	460.0	101	Apr-Sept.	73.7	324.6	457.6
net inflow ¹	445.0	101	Apr-July	70.3	300.8	439.8
<u>Malheur River Basin</u>						
Malheur River, nr. Drewsey	110.0	135	Apr-Sept.	44.4	106.4	81.5
Malheur River, N.Fk., at Beulah ²	85.0	133	Apr-Sept.	45.9	89.6	63.9
<u>Burnt River Basin</u>						
Burnt River, nr. Hereford ³	60.0	144	Apr-Sept.	23.0	61.4	41.8
<u>Powder River Basin</u>						
Powder River, at Salisbury	78.0 76.0	123 123	Apr-Sept. Apr-July	39.9 38.4	93.0 90.1	63.4 61.6
<u>Imnaha River Basin</u>						
Imnaha River at Imnaha	465.0	153	Apr-Sept.	253.7	359.9	303.4
<u>Grande Ronde River Basin</u>						
Wallowa River, E.Fk., nr. Joseph ⁴	16.0 13.0	142 141	Apr-Sept. Apr-July	11.3 8.9	14.4 10.9	11.3 9.2
Hurricane Creek, nr. Joseph	60.0	133	Apr-Sept.	43.1	56.9	45.1
Lostine River, nr. Lostine	168.0	136	Apr-Sept.	118.5	141.8	123.5
Bear Creek, nr. Wallowa	92.0	133	Apr-Sept.	63.9	73.8	69.1
Catherine Creek, nr. Union	89.0	125	Apr-Sept.	50.6	96.1	71.1
Grande Ronde River, at La Grande	240.0	136	Apr-Sept.	122.3	234.9	176.9

* Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1955 records not available at this time.

**Forecast by Boise Office, Soil Conservation Service. Corrected for storage.

¹ From U. S. B. R. records of inflow.

² Observed flow / change in storage in Agency Valley Reservoir.

³ Observed flow plus change in storage in Unity Reservoir.

⁴ Includes power plant tailrace.

Streamflow Forecasts - May 1, 1956 (Cont'd.)

Basin, Stream and Station		Forecast Runoff 1956	% 15-Yr. Avg.	Fore- cast Period	Measured Runoff* 1954 1953	15 - Yr. Average 1938-52
LOWER COLUMBIA BASIN						
<u>Umatilla River Basin</u>						
Umatilla River, nr. Gibbon	93.0	107	Apr-Sept.	72.6	94.0	86.8
Umatilla River, at Pendleton	180.0 167.0	108 108	Apr-Sept. Apr-July	117.7 111.5	197.9 193.4	167.4 154.5
McKay Creek nr. Pilot Rock	28.0 27.0	101 98	Apr-Sept. Apr-July	17.0 16.9	41.2 41.1	27.8 27.6
<u>Walla Walla River Basin</u>						
Walla Walla R., So. Fk., nr. Milton	71.0 58.0	101 100	Apr-Sept. Apr-July	66.4 52.6	74.2 59.9	70.5 57.8
<u>John Day River Basin</u>						
Strawberry Cr. nr. Prairie City	10.0	120	Apr-Sept.	7.7	11.1	8.3
John Day River at Prairie City ⁵	70.0 63.0	139 139	Apr-Sept. Apr-July	42.5 37.5	61.5 54.9	50.4 45.3
John Day River, Mid.Fk. at Ritter	175.0	144	Apr-Sept.	92.8	165.3	121.7
John Day River, N.Fk., nr. Dale	345.0	139	Apr-Sept.	229.7	333.8	248.4
<u>Crooked River Basin</u>						
Crooked R., nr. Post	124.0	100	Apr-Sept.	70.5	173.6	124.2 ^d
Ochoco Res., net inflow ⁶	28.0	100	Apr-Sept.	18.6	38.0	28.0
<u>Deschutes River Basin</u>						
Crescent Creek at Crescent Lake ⁷	35.0	165	Apr-Sept.	43.0	40.9	21.2
Little Deschutes R., nr. Lapine ⁷	130.0 120.0	145 152	Apr-Sept. Apr-July	134.4 117.8	138.3 118.8	89.6 79.1
Odell Cr., nr. Crescent	40.0	137	Apr-Sept.	37.5	37.1	29.2
Deschutes River, below Snow Creek	95.0	157	Apr-Sept.	80.8	75.0	60.4
Crane Prairie Res. inflow ⁸	175.0	145	Apr-Sept.	149.9	148.1	120.6

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1955 records not available at this time.

⁵Observed flow / Prairie Power Canal.

⁶Observed flow of Ochoco Cr. / Canal / changes in storage of Ochoco Res.

⁷Observed flow / changes in storage of Crescent Lake Reservoir.

⁸From State Engineer's file #3220a, tabulating total inflow to Crane Prairie Reservoir and outflow, showing the loss in the Reservoir.

cRecords not available.

d1938-39 excepted.

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Streamflow Forecasts - May 1, 1956 (Cont'd.)

Deschutes River Basin		Seasonal Streamflow in Thousands of Acre Feet				
Basin, Stream and Station	Forecast Runoff 1956	% 15-Yr. Avg.	Fore- cast Period	Measured Runoff* 1954	1953	15 - Yr. Average 1938-52
<u>Deschutes River Basin</u> (Continued)						
Deschutes River	725.0	142	Apr-Sept.	697.9	661.2	511.0
at Benham Falls ⁹	495.0	143	Apr-July	469.0	433.2	346.3
Tumalo Creek, nr. Bend ¹⁰	67.0	139	Apr-Sept.	59.8	61.3	48.3
Squaw Creek nr. Sisters	67.0	136	Apr-Sept.	62.7	57.8	49.3
White River,	220.0	145	Apr-Sept.	176.3	159.8	152.0
below Tygh Valley	200.0	148	Apr-July	157.7	142.2	134.7
<u>Hood River Basin</u>						
Hood River, W. Fk.,	200.0	136	Apr-Sept.	197.8	138.9	146.9
nr. Dee	170.0	134	Apr-July	172.4	118.0	127.3
Hood River,	425.0	139	Apr-Sept.	399.4	314.5	306.1
nr. Hood River ¹¹	365.0	141	Apr-July	343.1	258.7	259.7
<u>Willamette River Basin</u>						
Row River,	110.0	109	Apr-Sept.	84.5	146.3	100.5
nr. Dorena	106.0	110	Apr-July	78.8	141.3	96.1
McKenzie R.,	730.0	129	Apr-Sept.	668.8	658.1	564.7
at McKenzie Bridge	565.0	131	Apr-July	497.4	491.1	429.9
McKenzie River,	1580.0	132	Apr-Sept.	1336.4	1465.2	1194.7
nr. Vida	1320.0	135	Apr-July	1064.0	1188.3	978.0
South Santiam	795.0	142	Apr-Sept.	592.6	723.9	558.0
at Waterloo	765.0	145	Apr-July	532.0	686.5	524.6
North Santiam	1180.0	140	Apr-Sept.	955.4	792.9	841.5
at Mehama ¹²	1070.0	143	Apr-July	742.6	665.6	748.0
Willamette River	5900.0	135	Apr-Sept.	4902.3	6085.7	4354.5
at Salem ¹²	5300.0	137	Apr-July	3985.3	5361.3	3863.4
Clackamas River,	205.0	125	Apr-Sept.	201.3	167.6	163.6
at Big Bottom	170.0	128	Apr-July	164.0	134.3	132.5
Oak Grove Fk.	220.0	118	Apr-Sept.	217.8	196.0	185.7
abv. Power Intake	180.0	124	Apr-July	168.8	150.0	145.3
Clackamas River	705.0	118	Apr-Sept.	722.7	627.6	599.3
abv. Three Lynx	610.0	120	Apr-July	616.4	525.5	507.4
Clackamas River	935.0	120	Apr-Sept.	932.4	827.8	777.2
nr. Cazadero	855.0	128	Apr-July	798.9	707.0	668.7

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1955 records not available at this time.

⁹Observed flow / changes in storage in Crane Prairie, Wickiup and Crescent Lake Reservoirs.

¹⁰Observed flow / Columbia Southern Canal.

¹¹Observed flow plus P.P. & L. Co. power canal.

¹²Observed flow / changes in storage in any of the following reservoirs which are above the station: Lookout Point, Detroit, Fern Ridge, Cottage Grove and Dorena.

^cRecords not available

Streamflow Forecasts - May 1, 1956 (Cont'd.)

Basin, Stream and Station	Seasonal Streamflow in Thousands of Acre Feet					15 - Yr. Average 1938-52
	Forecast Runoff 1956	% 15-Yr. Avg.	Fore- cast Period	Measured 1954	Runoff* 1953	

OREGON AND CALIFORNIA COAST BASINS

Umpqua River Basin

No. Umpqua River, below Lake Creek	202.0	124	Apr-Sept.	218.0	212.4	164.0
Clearwater River, above Trap Creek	78.0	122	Apr-Sept.	86.2	81.3	64.2

Rogue River Basin

Hyatt Res., net Inflow ¹³	8.0	133	Apr-Sept.	6.4	9.6	6.0
Fourmile Lake, net Inflow ¹⁴	9.9	141	Apr-Sept.	1.8	2.3	7.0
Little Butte Cr.N.Fk. below Fish Lake ¹⁵	22.0	148	Apr-Sept.	15.6	21.0	14.9
Rogue R. So. Fk., nr. Prospect ¹⁶	100.0	131	Apr-Sept.	78.4	92.6	76.1
	85.0	131	Apr-July	65.5	77.6	65.1
Rogue R. Mid. Fk., nr. Prospect ¹⁷	89.0	120	Apr-Sept.	83.0	93.8	74.3
	71.0	121	Apr-July	64.3	72.5	58.7
Rogue River, above Prospect	400.0	126	Apr-Sept.	375.1	416.4	316.5
	330.0	126	Apr-July	305.9	344.5	265.1
Rogue River, below South Fork	830.0	122	Apr-Sept.	741.2	885.9	680.8
	680.0	123	Apr-July	588.9	713.3	553.0
Rogue River, at Raygold	1150.0	127	Apr-Sept.	987.3	1276.2	905.6
nr. Central Point	960.0	126	Apr-July	803.8	1069.7	760.7
Rogue River, at Grants Pass	1100.0	129	Apr-Sept.	967.9	1257.9	852.8 ^d
Applegate River, nr. Copper	200.0	172	Apr-Sept.	154.7	185.5	116.0 ^d
Illinois River, at Kerby	310.0	171	Apr-Sept.	191.7	330.9	181.2

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1955 records not available at this time.

¹³Observed flow of Keene Creek at Hyatt Prairie / storage changes / 1600 a.f. for estimated evaporation during April-September period.

¹⁴Observed outflow into Cascade Canal / storage changes / 1600 a.f. for estimated evaporation during April-September period.

¹⁵Observed flow plus changes in storage in Fish Lake Reservoir / 90% of Cascade Canal inflow.

¹⁶Observed flow / South Fork Power Canal.

¹⁷Observed flow / Middle Fork Power Canal.

^cRecords not available.

^d1938 excepted.



Streamflow Forecasts - May 1, 1956 (Cont'd.)

Basin, Stream and Station	Seasonal Streamflow in Thousands of Acre Feet					
	Forecast Runoff 1956	% 15-Yr. Avg.	Fore- cast Period	Measured 1954	Runoff* 1953	15 - Yr. Average 1938-52
<u>Klamath River Basin</u>						
Sprague River, nr. Chiloquin	455.0	181	Apr-Sept.	351.1	394.5	252.6
Williamson River, below Sprague R.	740.0	182	Apr-Sept.	643.0	650.2	406.0
	650.0	192	Apr-July	553.9	560.3	340.2
Upper Klamath Lake	980.0	186	Apr-Sept.	834.5	893.8	525.6
net Inflow ¹⁸	850.0	200	Apr-July	687.1	738.2	424.1
Clear Lake Res., net Inflow	75.0	153	Apr-Sept.	26.0	65.7	49.4
Gerber Res., net Inflow	40.0	166	Apr-July	17.5	31.3	24.1

GREAT BASIN INTERIOR DRAINAGE

<u>Goose Lake Basin</u>						
Drew Reservoir, net Inflow	34.0	112	Apr-July	28.3	54.7	30.4 ^d
<u>Warner Lake Basin</u>						
Twentymile Cr. nr. Adel	33.0	156	Apr-June	8.9	20.0	21.1 ^e
Deep Cr., above Adel	107.0	159	Apr-June	56.0	82.0	67.2
Honey Cr., nr. Plush	24.0	154	Apr-June	13.7	17.0	15.6 ^f
<u>Chewaucan River Basin</u>						
Chewaucan River, nr. Paisley	92.0	126	Apr-June	97.8	103.8	72.8
<u>Malheur and Harney Lakes Basin</u>						
Trout Cr., nr. Denio	10.6	110	Apr-Sept.	3.5	11.2	9.6
Donner und Elitzen R., nr. Frenchglen	74.0	112	Apr-Sept.	45.0	72.1	66.3
Silvies River, nr. Burns	105.0	103	Apr-Sept.	51.7	138.1	102.3

*Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. 1955 records not available at this time.

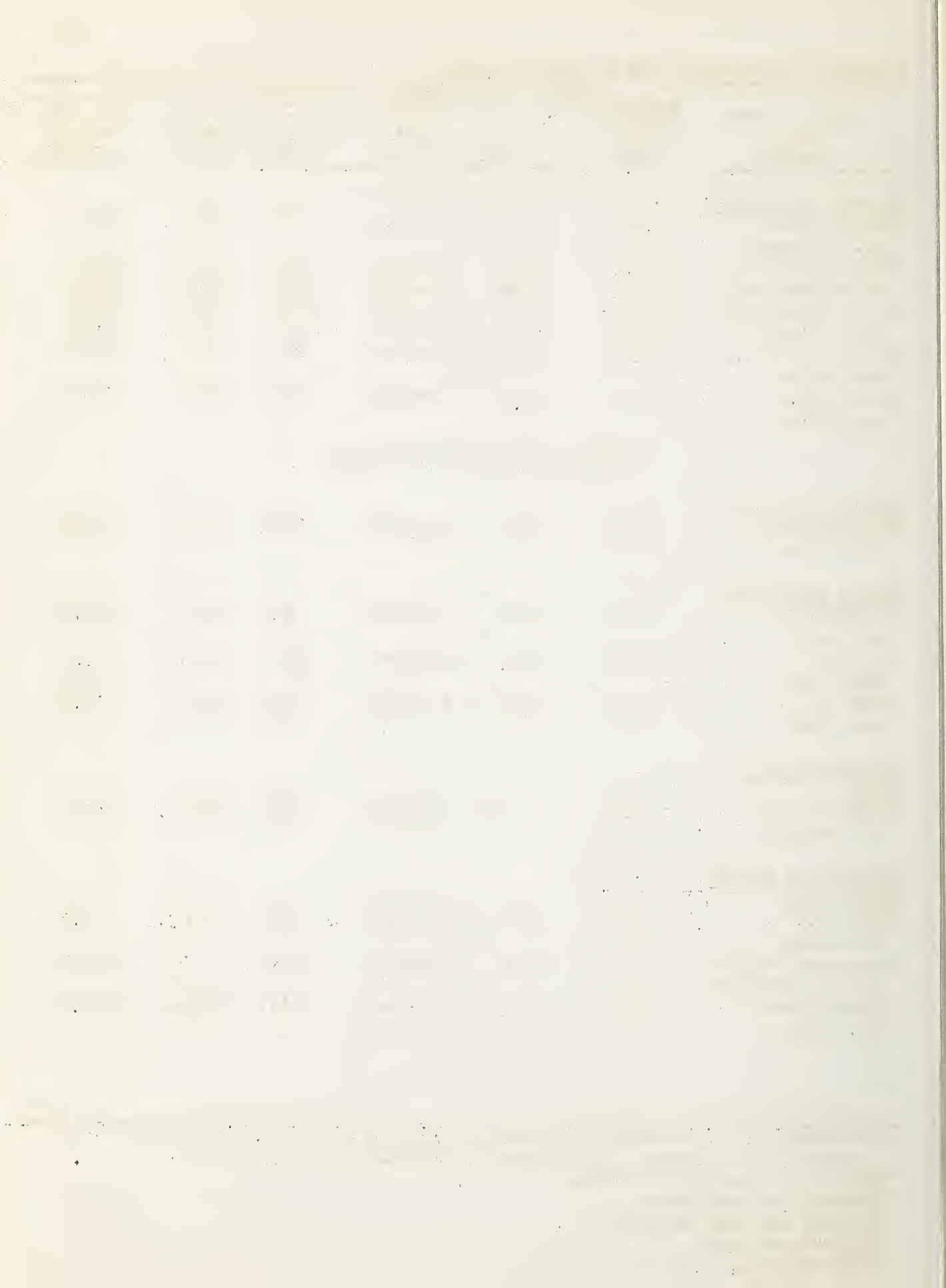
¹⁸From COPCO records of inflow.

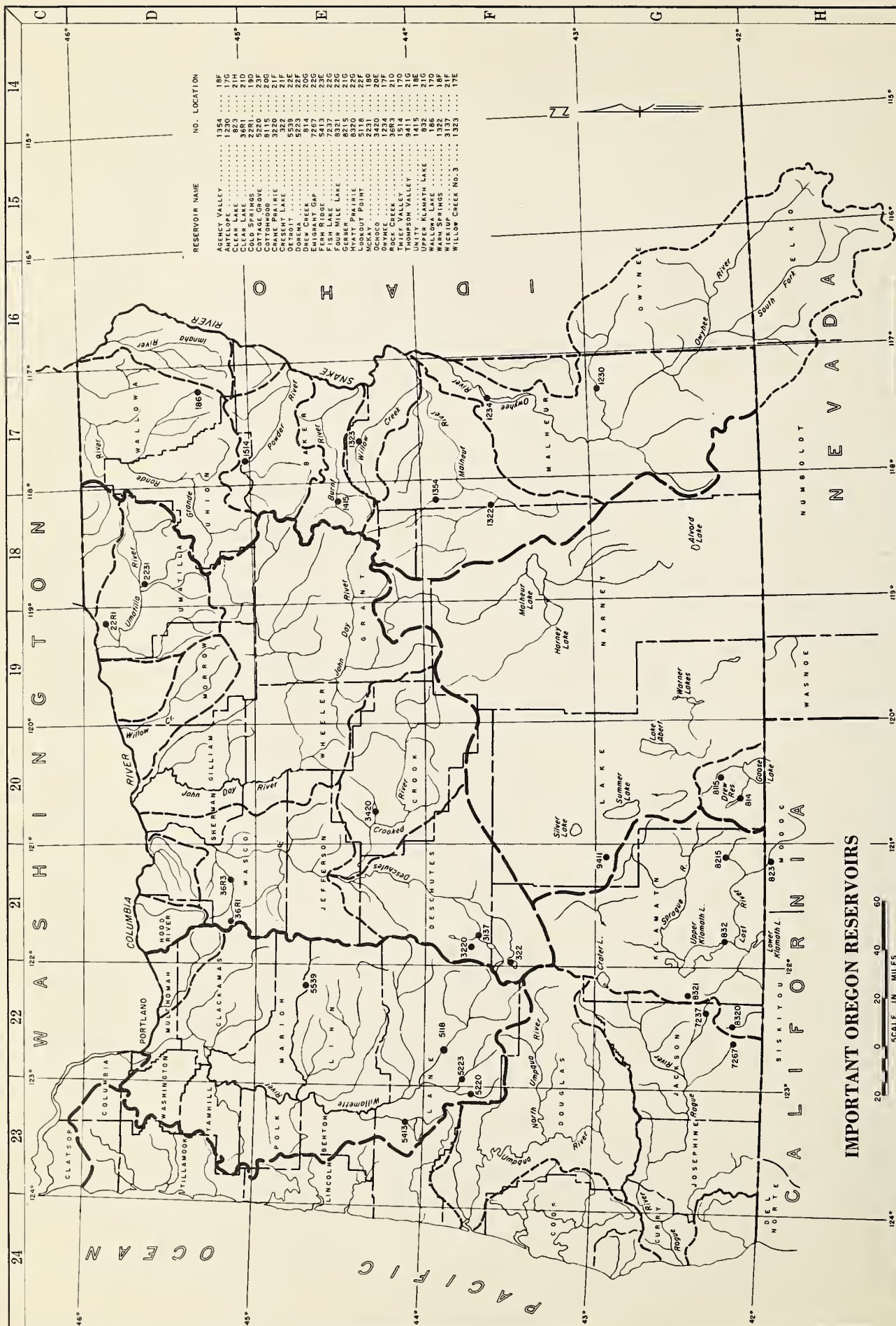
^cRecords not available.

^d1942-43 and 1945 excepted.

^e1938-40 excepted.

^f1942 excepted.





STATUS OF OREGON RESERVOIR STORAGE - MAY 1, 1956

BASIN and/or STREAM	RESERVOIR	USABLE CAPACITY 1000s AF	USABLE STORAGE - 1000			ACRE FEET
			1956	1955	1954	15-Yr.Avg. 1938-52

UPPER COLUMBIA DRAINAGELower Snake in Oregon

<u>Owyhee</u>	Antelope	36.5	N.R.	17.5	31.3	30.8 ^b
	Owyhee	715.0	660.0	323.7	503.0	668.5
<u>Malheur</u>	Warm Springs	191.0	174.8	46.4	147.2	148.9
	Agency Valley	60.0	59.2	33.3	46.7	57.0
<u>Burnt</u>	Unity	25.2	24.8	13.2	25.2	22.0
<u>Grande Ronde</u>	Wallowa Lake	40.9	26.4	19.1	33.3	23.8

LOWER COLUMBIA DRAINAGE

<u>Umatilla</u>	McKay	74.0	70.8	40.6	53.5	66.9
	Cold Springs	50.0	49.2	49.2	50.0	48.4
<u>Deschutes</u>	Ochoco	46.0	46.5	26.0	46.5	35.7
	Crescent Lake	54.9	52.9	21.3	37.1	43.2
	Crane Prairie	55.3	48.5	38.6	59.2	41.7
	Wickiup	203.0	199.9	198.4	198.7	110.8 ^c
<u>Willamette</u>	Cottage Grove	30.1 ^a	23.9	24.4	22.9	24.2 ^c
	Dorene	70.5 ^a	53.9	54.3	50.4	- -
	Fern Ridge	94.2 ^a	80.6	94.2	88.8	74.0 ^d
	Detroit	340.0 ^a	238.0	102.5	308.6	- -
	Lookout Point	350.0 ^a	258.0	186.0	- -	- -

OREGON AND CALIFORNIA COAST DRAINAGE

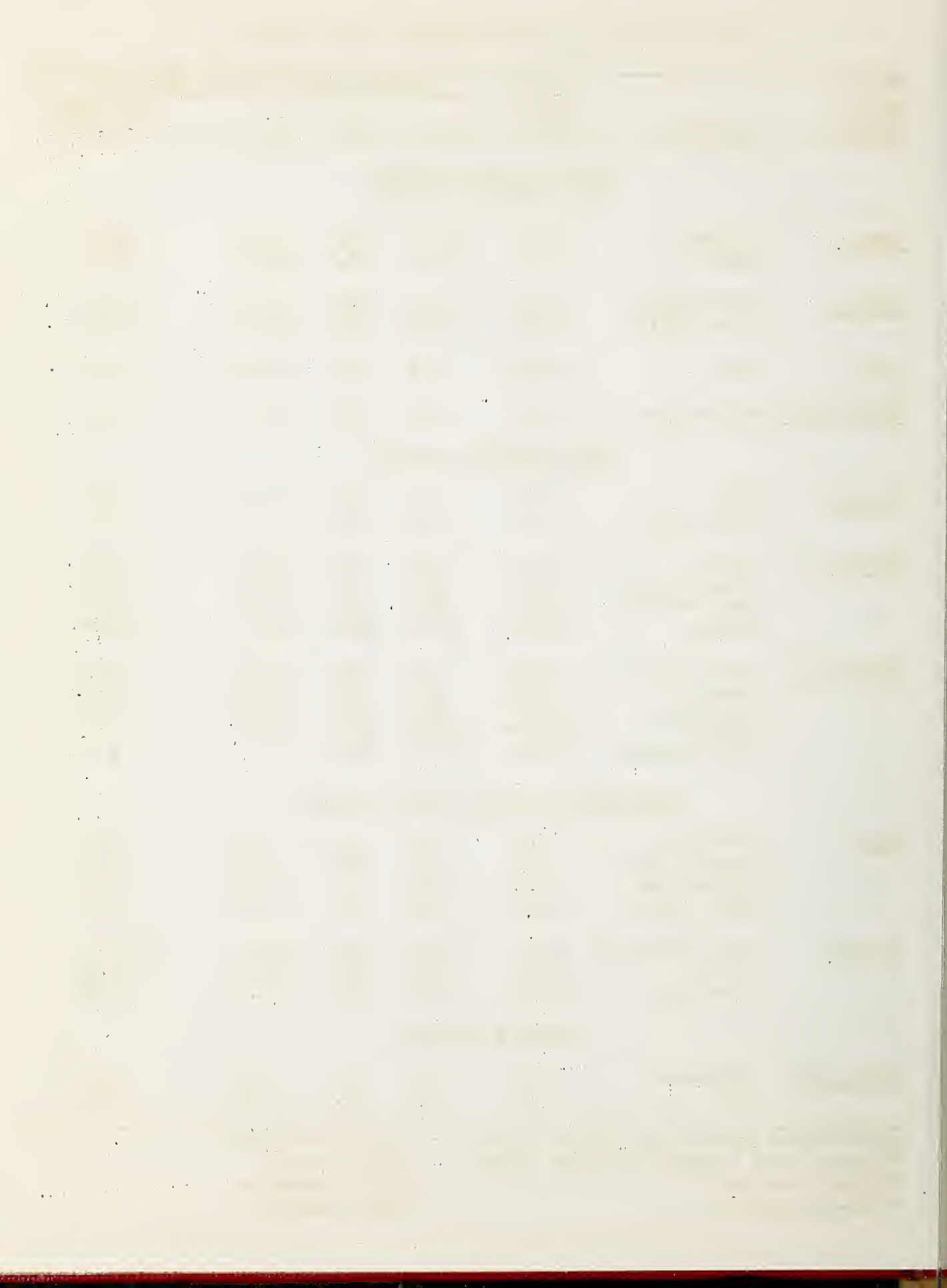
<u>Rogue</u>	Fish Lake	7.8	5.9	5.6	7.7	5.6
	Fourmile Lake	16.1	6.4	10.4	16.1	9.6
	Emigrant Gap	8.3	8.3	5.3	8.3	8.2
	Hyatt Prairie	16.1	12.4	11.6	16.1	9.7
<u>Klamath</u>	Upper Klamath Lk.	584.0	538.5	533.2	540.3	499.9
	Gerber	94.0	82.7	46.5	80.3	60.6 ^e
	Clear Lake	440.2*	477.8	251.8	325.2	253.3 ^e

INTERIOR DRAINAGE

<u>Goose Lake</u>	Cottonwood	4.1	3.6	2.8	4.5	3.3 ^f
	Drew	62.5	64.7	39.8	62.9	56.9 ^g

*Flashboards increase capacity to 513.0.

^d1938-41 excepted.^aStorage space reserved for flood control.^e1938 excepted.^b1948-50 excepted.^f1942-43 excepted.^c1938-42 excepted^g1942 excepted



SNOW COVER MEASUREMENTS									
DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	Date of Survey	1956	Past Record				Previous 1938-52 Yrs. of Record
				Snow Depth (In.)	Water Content: (In.)	:Water Content(In.)			
						:1955	1954	Avg.	
U P P E R C O L U M B I A D R A I N A G E									
L O W E R S N A K E I N O R E G O N									
OWYHEE RIVER									
Bear Creek	15H1	7800	5-1	43	19.4	21.8	- -	- -	1
Upper Jack Creek	16H2	7250	4-27	0	0.0	No previous record			
Fox Creek	15H2	6800	5-1	0	0.0	4.9	- -	- -	7
Lower Jack Creek	16H1	6800	4-27	0	0.0	No previous record			
Rodeo Flat	15H6	6800	4-26	0	0.0	No previous record			
Big Bend	15H4	6700	4-26	0	0.0	- -	- -	- -	3
Fry Canyon	15H7	6700	4-26	0	0.0	No previous record			
Gold Creek	15H5	6600	4-26	0	0.0	No previous record			
Silver City	16F3	6400	5-6	4	1.6	17.1	- -	5.2**	9
South Mtn. No. 2	16G1	6340	5-1	1	0.3	14.4	- -	- -	2
Taylor Canyon	15H9	6200	4-27	0	0.0	No previous record			
MALHEUR RIVER									
Blue Mtn. Springs	18E16	5900	4-31	5	1.9	13.8	0.7	- -	6
Lake Creek	18E18	5120	Not surveyed			8.4	- -	- -	3
BURNT RIVER									
Dooley Mountain	17E1	5430	5-1	0	0.0	7.8	0.0	- -	2
*Gold Center	18E8	5340	Not surveyed			- -	0.0	- -	1
Tipton	18E9	5100	5-1	0	0.0	8.9	0.0	- -	3
Blue Mtn. Summit	18E13	5098	5-1	0	0.0	8.1	0.0	- -	6
POWDER RIVER									
Anthony Lake	18E1	7125	5-3	56	30.8	31.6	27.0	- -	2
Goodrich Lake	18E6	6775	No report			34.9	- -	- -	2
Bourne	18E5	5800	Not surveyed			- -	2.4	- -	1
Dooley Mountain	17E1	5430	5-1	0	0.0	7.8	0.0	- -	2
Eilertson Meadows	18E3	5400	Not surveyed			11.3	- -	- -	2
*Gold Center	18E8	5340	Not surveyed			- -	0.0	- -	1
IMNAHA RIVER									
*Aneroid Lake No. 1	17D1	7480	4-30	93	47.6 ^b	37.0	41.1	- -	9
*Aneroid Lake No. 2	17D2	7000	5-1	71	28.6 ^b	29.5	29.2	- -	6
GRANDE RONDE RIVER									
Aneroid Lake No. 1	17D1	7480	4-30	93	47.6 ^b	37.0	41.1	- -	9
Anthony Lake	18E1	7125	5-3	56	30.8 ^a	31.6	27.0	- -	2
Aneroid Lake No. 2	17D2	7000	5-1	71	28.6 ^b	29.5	29.2	- -	6
Moss Spring	17D6	5850	4-30	35	15.9	30.1	- -	- -	2

* Not located directly on this drainage area. ^aTelegraphic. ^bPartly estimated.
 ** Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

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ORIGINAL ARTICLES

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		SNOW COVER MEASUREMENTS						
				1956		Past Record		
DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	Date of Survey	Snow	Water	:Water Content(In.)		Previous 1938-52 Yrs. of Record
				Depth (In.)	Content: (In.)	:1955	1954 Avg.	

GRANDE RONDE RIVER (Cont'd.)

Beaver Reservoir	18D9	5340	4-27	21	7.8	13.5	0.0	--	3
Tollgate	18D3	5070	4-30	24	11.9	35.2	8.7	--	6
County Line	18D8	4800	Not surveyed			8.4	--	--	1
Schoolmarm	18D7	4775	Not surveyed			6.0	--	--	1
Meacham	18D5	4300	4-30	0	0.0	18.1	0.0	--	6

L O W E R C O L U M B I A D R A I N A G EUMATILLA RIVER

Arbuckle Mtn.	19D2	5400	4-23	0	0.0	15.7	0.5	--	4
Tollgate	18D3	5070	4-30	24	11.9	35.2	8.7	--	6
Meacham	18D5	4300	4-30	0	0.0	18.1	0.0	--	6
Emigrant Springs	18D4	3925	4.30	0	0.0	12.7	0.0	--	6

WILLOW CREEK

Arbuckle Mtn.	19D2	5400	4-23	0	0.0	15.7	0.5	--	4
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WALLA WALLA RIVER

Tollgate	18D3	5070	4-30	24	11.9	35.2	8.7	--	6
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JOHN DAY RIVER

Anthony Lake	18E1	7125	5-3	56.2	30.8 ^a	31.6	27.0	--	2
Olive Lake	18E7	6000	Report delayed			22.8	--	--	3
Blue Mtn. Springs	18E16	5900	4-30	5	1.9	13.8	0.7	--	6
Arbuckle Mtn.	19D2	5400	4-23	0	0.0	15.7	0.5	--	4
Gold Center	18E8	5340	Not surveyed		--	--	0.0	--	1
*Izee Summit	19E9	5293	5-1	0	0.0	7.2	0.0	--	5
Starr Ridge	19E7	5156	5-1	0	0.0	4.3	0.0	--	5
Tipton	18E9	5100	5-1	0	0.0	8.9	0.0	--	3
Blue Mtn. Summit	18E13	5098	5-1	0	0.0	8.1	0.0	--	6
Beech Creek Summit	19E2	4800	5-1	0	0.0	4.9	0.0	--	4
Schoolmarm	18D7	4775	Not surveyed			6.0	--	--	1

CROOKED RIVER

Marks Creek	20E1	4540	5-1	0	0.0	0.5	--	--	2
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DESCHUTES RIVER

New Dutchman Flat	21F2	6400	4-27	118	66.1	53.7	60.3	65.4**	11
Paulina Lake	21F13	6330	5-2	44	21.5	18.6	--	--	1
Windigo Pass	22F15	5800	5-1	117	61.5	48.8	46.1	--	7

* Not located directly on this drainage area. ^aTelegraphic.

** Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



			SNOW COVER MEASUREMENTS					
			1956		Past Record			
DRAINAGE BASIN	No.		Date	Snow	Water	:Water Content(In.)		Previous
and	or		of	Depth	Content:	1938-52		Yrs. of
SNOW COURSE	State	Elev.	Survey	(In.)	(In.)	:1955	1954	Avg. Record

DESCHUTES RIVER (Cont'd.)

Three Creeks Mdws.	21E13	5600	4-26	43	18.7	21.0	13.2	- -	7
Willamette Pass	22F14	5600	4-30	103	56.3	50.2	48.4	- -	7
Tangent	21F3	5400	4-27	43	19.8	16.6	7.8	- -	4
Fire Road	21F14	5050	5-2	0	0.0	4.6	- -	- -	1
Cascade Summit	22F3	4880	5-1	75	35.7	42.3	25.7	32.7	10
New Crescent Lake	21F10	4800	5-1	24	10.5	15.3	0.0	- -	4
*Chemult	21F11	4760	4-30	1	0.5	1.0 ^b	0.0	0.6**	9
Crescent Lake	21F9	4760	5-1	0	0.0	9.2	0.0	- -	6
Hogg Pass	21E6	4755	5-1	115	58.6	62.5	43.4	57.2**	9
Black Pine Spg.	21E11	4600	4-26	0	0.0	5.0	0.0	- -	4
Hungry Flat	21F4	4400	4-27	0	0.0	0.0	0.0	- -	4
Paulina Prairie	21F15	4285	5-2	0	0.0	0.0	- -	- -	1
Clear Lake	21D12	3500	4-28	31	14.5	17.8	7.8	- -	5

WILLAMETTE VALLEY STREAMSSANDY RIVER¹

Phlox Point	21D8	5600	5-2	154	87.4	89.2	70.8	59.1**	17
Still Creek	21D9	3700	5-2	65	32.1	39.8	21.2	14.9**	16
Clear Lake	21D12	3500	4-28	31	14.5	17.8	7.8	- -	5

CLACKAMAS RIVER

Clear Lake	21D12	3500	4-28	31	14.5	17.8	7.8	- -	5
Peavine Ridge	21D14	3500	4-30	55	25.1	31.4	17.8	17.5**	11
Timothy Lake	21D18	3200	5-1	47	21.1	No previous record			
Timothy Meadows	21D17	3200	4-30	12	5.4	No previous record			
Big Bottom	21D15	2118	5-1	15	5.8	7.7	0.0	- -	4
Lake Harriet	21D16	2045	4-29	0	0.0	0.0	0.0	- -	4

SANTIAM RIVERS

Hogg Pass	21E6	4755	5-1	115	58.6	62.5	43.4	57.2**	9
Santiam Junction	21E5	3990	5-1	46	23.7	38.4	8.4	19.1**	8
Marion Forks	21E4	2730	5-1	18	8.6	18.0	0.0	- -	7
Whitewater Bridge	21E3	2175	5-1	0	0.0	T	0.0	- -	5
Detroit (new town)	22E1	1500 ¹	5-1	0	0.0	0.0	0.0	- -	5
Detroit Dam	22E2	1580	5-1	0	0.0	0.0	0.0	- -	5
Mill City	22E3	826	5-1	0	0.0	0.0	0.0	- -	5
Snow Line: Approximately 2200'									

McKENZIE RIVER

McKenzie	21E7	4800	5-3	107	66.0	62.9	- -	- -	1
Hogg Pass	21E6	4755	5-1	115	58.6	62.5	43.4	57.2**	9
Santiam Junction	21E5	3990	5-1	46	23.7	38.4	8.4	19.1**	8
Dead Horse Grade	21E8	3800	5-3	48	22.6	37.8	- -	- -	1

* Not located directly on this drainage area. ^bPartly estimated.¹ Not strictly a part of the Willamette Drainage; these surveys are indicative of west slope conditions.

** Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

		SNOW COVER MEASUREMENTS						
				1956		Past Record		
DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	Date of Survey	Snow Depth (In.)	Water Content: (In.)	Water Content(In.)		Previous Yrs. of Record
						1955	1954	

McKENZIE RIVER (Cont'd.)

White Branch Slide	21E9	2800	5-3	0	0.0	16.8	--	--	1
Lost Creek Ranch	22E4	1956	5-3	0	0.0	0.0	--	--	1
McKenzie Bridge	22E5	1372	5-3	0	0.0	0.0	--	--	1
Vida	22E6	800	5-3	0	0.0	0.0	--	--	1
Snow Line: Approximately 3000'									

MIDDLE FORK WILLAMETTE RIVER

Willamette Pass	22F14	5600	4-30	103	56.3	50.2	48.4	--	7
Cascade Summit	22F3	4880	5-1	75	35.7	42.3	25.7	32.7**	10
Salt Creek Falls	22F4	4000	5-1	45	19.8	31.8	10.0	--	6
Railroad Overpass	22F5	2750	5-1	0	0.0	1.0	0.0	--	5
McCredie Spring	22F6	2120	5-1	0	0.0	0.0	0.0	--	6
Oakridge	22F7	1310	5-1	0	0.0	0.0	0.0	--	5
Meridian Dam	22F8	750	5-1	0	0.0	0.0	0.0	--	5
Snow Line: Approximately 3700'									

OREGON AND CALIFORNIA COAST DRAINAGEUMPQUA RIVER

Windigo Pass	22F15	5800	5-1	117	61.5	48.8	46.1	--	7
Diamond Lake	22F18	5315	Report delayed			23.4	14.3	18.1**	17
North Umpqua	22F16	4215	4-30	15	5.5	14.6	--	--	1
Trap Creek	22F17	3800	4-30	0	0.0	No previous record			

ROGUE RIVER

*Park Headquarters	22G5	6450	4-30	161	68.8	58.2	60.8	62.2**	12
*Annie Spring	22G6	6018	4-30	130	52.7	48.0	43.0	42.8**	15
*Fourmile Lake	22G12	6000	4-30	73	37.2	28.4	11.2	--	3
Billie Creek Div.	22G13	5300	4-30	49	26.3	23.3	--	--	6
Hobart Lake	22G17	5010	Not surveyed			T	--	--	1
*Hyatt Prairie Res.	22G16	4900	Not surveyed			T	--	--	5
Fish Lake	22G14	4865	4-30	16	7.1	13.6	0.0	--	5
Silver Burn	22G2	3720	Report delayed			8.3	0.0	--	4
South Fork Canal	22G9	3500	Report delayed			15.7	0.0	--	3

KLAMATH LAKE BASIN

Park Headquarters	22G5	6450	4-30	161	68.8	58.2	60.8	62.2**	12
Annie Spring	22G6	6018	4-30	130	52.7	48.0	43.0	42.8**	15
Fourmile Lake	22G12	6000	4-30	73	37.2	28.4	11.2	--	3
Strawberry	20G9	5600	Not surveyed			--	0.0	--	1
*Quartz Mountain	20G6	5320	5-1	0	0.0	0.0	0.0	--	5
Billie Creek Div.	22G13	5300	4-30	49	26.3	23.3	--	--	6
Lake of the Woods	22G15	4960	4-30	26	11.9	7.8	3.9	5.6**	9
Hyatt Prairie Res.	22G16	4900	Not surveyed			T	--	--	5
Chemult	21F11	4760	4-30	1	0.5	1.0 ^b	0.0	0.6**	9

* Not located directly on this drainage area. ^bPartly estimated.

** Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



DRAINAGE BASIN and SNOW COURSE		SNOW COVER MEASUREMENTS							
		No. or State	Elev.	Date of Survey	1956		Past Record		
					Snow Depth (In.)	Water Content: (In.)	Water Content: (In.)	1938-52 Avg.	Previous Yrs. of Record

I N T E R I O R D R A I N A G EGOOSE LAKE BASIN

Strawberry	20G9	5600	Not surveyed			--	0.0	--	1
Quartz Mountain	20G6	5320	5-1	0	0.0	0.0	0.0	--	5

CHEWAUCAN RIVER

*Quartz Mountain	20G6	5320	5-1	0	0.0	0.0	0.0	--	5
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HARNEY BASIN

Izee Summit	19E9	5293	5-1	0	0.0	7.2	0.0	--	5
Idlewild Camp	18F3	5200	No report			2.2	--	--	3
Starr Ridge	19E7	5156	5-1	0	0.0	4.3	0.0	--	5
Lake Creek	18E18	5120	Not surveyed			8.4	--	--	3

* Not located directly on this drainage area.

DRAINAGE BASIN and SNOW COURSE		No. or State	Elev.	SNOW COVER MEASUREMENTS						
				Date of Survey	1956		Past Record			Previous Yrs. of Record
					Snow Depth (In.)	Water Content: (In.)	:Water Content(In.)		1938-52 Avg.	
							:1955	1954		

A P R I L 1, 1 9 5 6ROGUE RIVER

Grayback Peak	23G3	6000	4-7	116	56.3 ^b	25.7	36.4	25.4	20
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A P R I L 1 5, 1 9 5 6MALHEUR RIVER

Blue Mtn. Springs	18E16	5900	4-14	32	13.3	- -	- -	- -	1
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BURNT RIVER

Blue Mtn. Summit	18E13	5098	4-14	14	4.8	No previous record			
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GRANDE RONDE RIVER

Aneroid Lake No. 1	17D1	7480	4-17	118	56.4	- -	- -	- -	4
Aneroid Lake No. 2	17D2	7000	4-17	89	37.9	No previous record			
Moss Spring	17D6	5850	4-17	56	25.8	- -	- -	- -	1
Tollgate	18D3	5070	4-16	54	25.8	- -	- -	- -	2
Meacham	18D5	4300	4-16	12	4.9	- -	- -	- -	2

UMATILLA RIVER

Tollgate	18D3	5070	4-16	54	25.8	- -	- -	- -	2
Meacham	18D5	4300	4-16	12	4.9	- -	- -	- -	2
Emigrant Springs	18D4	3925	4-16	1	0.1	- -	- -	- -	2

JOHN DAY RIVER

Blue Mtn. Springs	18E16	5900	4-14	32	13.3	- -	- -	- -	1
Blue Mtn. Summit	18E13	5098	4-14	14	4.8	No previous record			

DESCHUTES RIVER

Three Creek Meadows	21E13	5600	4-16	62	27.4	No previous record			
Black Pine Springs	21E11	4600	4-16	10	3.6	No previous record			

SANDY RIVER

Phlox Pt. -Mt. Hood	21D8	5600	4-18	178	97.6	No previous record.			
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^b Partly estimated.

			SNOW COVER MEASUREMENTS						
			1956		Past Record				
DRAINAGE BASIN and SNOW COURSE	No. or State	Elev.	Date of Survey	Snow Depth (In.)	Water Content: (In.)	Water Content(In.)			Previous Yrs. of Record
						1938-52	1955	1954	
						Avg.			

WILLAMETTE VALLEY STREAMSSANTIAM RIVERS

Hogg Pass	21E6	4755	4-17	144	69.5	55.6	--	--	2
Santiam Junction	21E5	3990	4-17	83	40.5	35.4	--	--	1
Marion Forks	21E4	2730	4-17	48	21.4	19.6	--	--	1
Whitewater Bridge	21E3	2175	4-17	T	T	2.2	--	--	1
Detroit (new town)	22E1	1500	4-17	0	0.0	0.0	--	--	1
Detroit Dam	22E2	1580	4-17	0	0.0	0.0	--	--	1
Mill City	22E3	826	4-17	0	0.0	0.0	--	--	1
Snow Line: Approximately 2000'									

MIDDLE FORK WILLAMETTE RIVER

Cascade Summit	22F3	4880	4-16	101	48.0	36.2	--	--	1
Champion	22F9	4500	4-16	92	44.9	42.4	--	--	1
Salt Creek Falls	22F4	4000	4-16	67	28.8	26.0	--	--	1
Railroad Overpass	22F5	2750	4-16	0	0.0	T	--	--	1
McCredie Spring	22F6	2120	4-16	0	0.0	0.0	--	--	1
Oakridge	22F7	1310	4-16	0	0.0	0.0	--	--	2
Meridian Dam	22F8	750	4-16	0	0.0	0.0	--	--	2
Snow Line: Approximately 3500'									

COAST FORK WILLAMETTE RIVER (Row River)

Champion	22F9	4500	4-16	92	44.9	42.4	--	--	1
Golden Curry Creek	22F10	3136	4-16	15	6.8	5.3	--	--	1
Weaver Creek	22F11	2440	4-16	0	0.0	T	--	--	1
Lund Park	22F12	1740	4-16	0	0.0	0.0	--	--	1
Layng Creek R. S.	22F13	1200	4-16	0	0.0	0.0	--	--	1
Snow Line: Approximately 2800'									

UMPUA RIVER

Diamond Lake	22F18	5315	4-16	70	32.1	--	--	--	10
Champion	22F9	4500	4-16	92	44.9	42.4	--	--	1

ROGUE RIVER

Big Red Mountain	22G21	6500	4-14	104	50.9	No previous record			
Little Red Mountain	22G22	6500	4-15	80	39.6	No previous record			
Siskiyou Summit	22G20	4630	4-14	0	0.0	--	--	--	1

KLAMATH RIVER

Park Headquarters	22G5	6450	4-16	186	76.3	No previous record			
Annie Spring	22G6	6018	4-16	156	60.4	--	--	--	5
Quartz Mountain	20G6	5320	4-16	7	1.7	No previous record			



		SNOW COVER MEASUREMENTS						
		1956			Past Record			
DRAINAGE BASIN	No.	Date	Snow	Water	:Water Content(In.)		Previous	
and	or	of	Depth	Content:	1938-52		Yrs. of	
SNOW COURSE	State	Elev. Survey	(In.)	(In.)	:1955	1954	Avg. Record	

Addendum A P R I L 1, 1956

WILLAMETTE VALLEY STREAMS

CLACKAMAS RIVER

Timothy Meadows 21D17 3200 4-2 66 28.1 No previous record

HARNEY BASIN

Fish Creek	18G2	7900	4-4	84	33.2 ^b	18.7	22.4	26.1**	16
Silvies	18G1	6900	4-4	34	14.6	11.1	12.5	14.6**	18

^bPartly estimated.

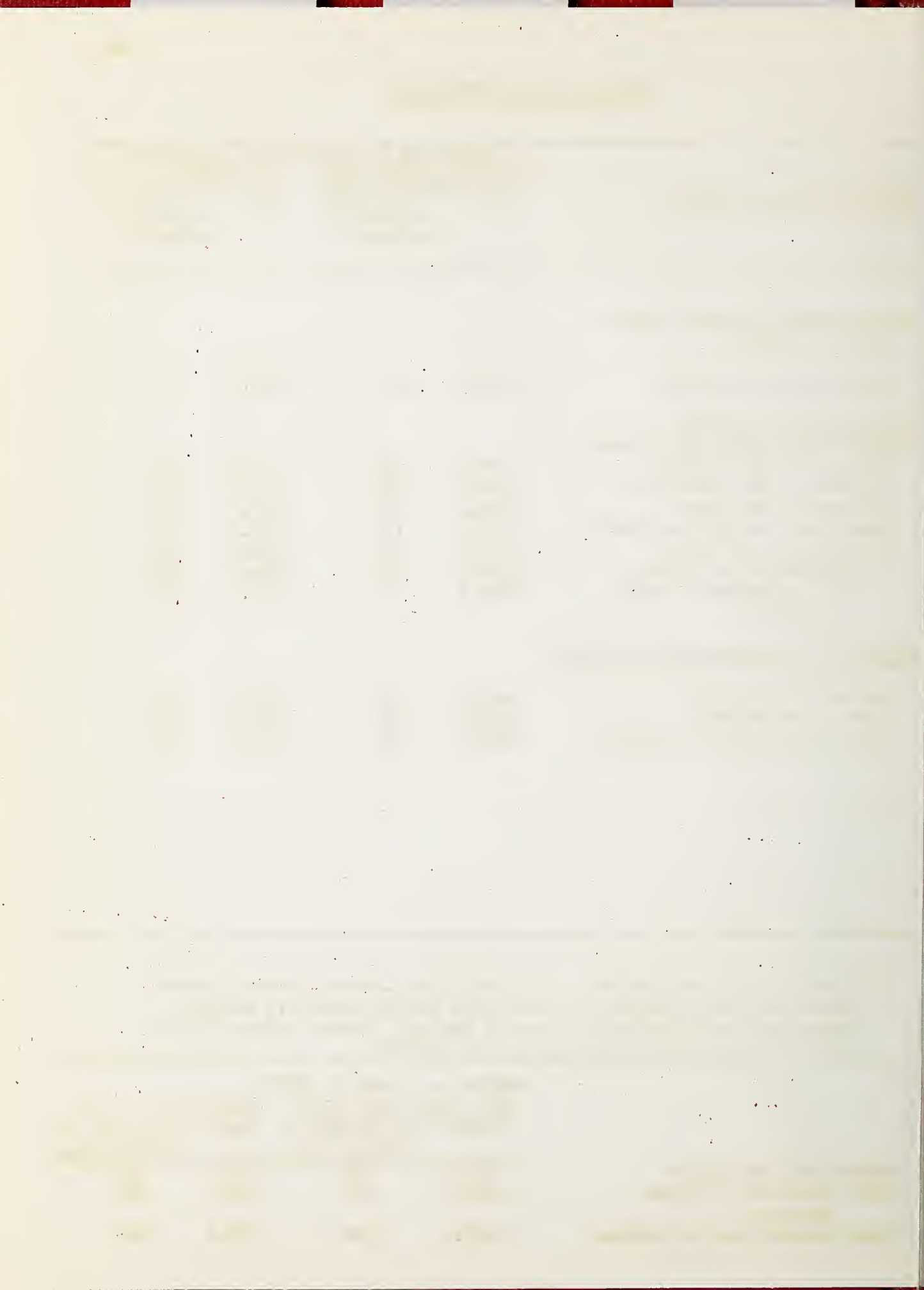
**Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

CURRENT OREGON STREAMFLOW^a

<u>BASIN, RIVER and STATION</u>	<u>Streamflow in Thousands of acre-feet</u>			
	<u>Oct. 1955 - Mar. 1956</u>		<u>Apr. 1956</u>	
	<u>Total</u>	<u>As percent of 1938-52 average</u>	<u>Total</u>	<u>As percent of 1938-52 average</u>
<u>UPPER COLUMBIA DRAINAGE (Lower Snake in Oregon)</u>				
Owyhee Res. net inflow	500.2	176	177.3	71
<u>LOWER COLUMBIA DRAINAGE</u>				
Walla Walla, So. Fk. nr. Milton				
Umatilla R. nr. Umatilla	107.6	152	86.3	122
John Day R. at Service Cr.	1090.0	186	548.0	151
Deschutes R. at Moody	2908.0	136	585.5	128
Hood R. and conduit nr. Hood R.	724.2	155	132.1	153
Willamette R. at Salem	20980.0	166	2116.0	126
Willamette R. at Albany	12760.0	168	1294.0	128
M.F. Willamette R. below North Fk.	2020.0	160	318.9	132
<u>OREGON AND CALIFORNIA COAST DRAINAGE</u>				
Umpqua R. nr. Elkton	7836.0	132	692.6	132
Rogue R. at Raygold	2233.0	171	321.9	126
Upper Klamath Lake net inflow	1265.0	182	405.2	235

^aPreliminary data supplied by: U. S. Geological Survey, Current Records Center, Portland, Oregon; The California Oregon Power Co., Medford, Oregon; and North and South Boards of Control, Owyhee Project, Nyssa, Oregon; office of State Engineer, Salem, Oregon.

ERRATA -- April 1, 1956				
	<u>Oct. 1955 - Mar. 1956</u>		<u>Mar. 1956</u>	
	<u>Total</u>	<u>As percent of 1938-52 Avg.</u>	<u>Total</u>	<u>As percent of 1938-52 Avg.</u>
Owyhee Res. net inflow	500.2	176	208.1	160
M.F. Willamette R. below North Fk.	2020.0	160	245.3	103
Upper Klamath Lake Net Inflow	1265.0	182	250.3	165



OREGON PRECIPITATION^a

DRAINAGE DIVISIONS	FALL		WINTER		SPRING	
	Sept.-Oct.- Nov. 1955		Dec.-Jan.-Feb.- Mar. 1955-'56		April 1956	
	Observed	Departure ^b	Observed	Departure ^b	Observed	Departure ^b
Southeastern	2.27	- 0.57	6.03	/ 1.01	0.93	/ 0.04
Blue Mountains	6.00	/ 0.63	11.76	/ 2.64	0.46	- 0.99
Wallowa Mountains	7.24	/ 1.32	11.10	/ 2.55	0.70	- 1.17
Lower Columbia	7.38	/ 2.15	12.36	/ 3.48	0.11	- 0.99
Upper Deschutes	3.74	- 0.17	11.22	/ 4.53	0.34	- 0.43
Willamette Valley	21.88	/ 5.43	43.99	/ 15.43	1.69	- 1.54
Southwestern	8.33	/ 0.98	25.12	/ 10.48	1.00	- 0.43
South Central	3.90	/ 0.26	11.44	/ 4.78	1.05	/ 0.28

Southeastern - Owyhee and lower Malheur drainages.

Blue Mountains - Upper valleys of the Umatilla, John Day and Malheur, and the Powder, Burnt and Silvies drainages.

Wallowa Mountains - Imnaha, Wallowa and Catherine drainages.

Lower Columbia - Lower valleys of the Walla Walla, Umatilla, John Day and Deschutes, and the Hood and Sandy drainages.

Upper Deschutes - Upper Deschutes and Crooked drainages.

Willamette Valley - All Willamette drainages.

Southwestern - Umpqua, Rogue and Williamson drainages.

South-Central - Sprague, Lost and Interior Basin drainages.

a - Preliminary analysis furnished by U. S. Weather Bureau.

b - Departure from 15-year (1938-52) drainage division average.

Note - Precipitation shown in inches.

The following organizations cooperate in the Oregon Snow Survey work:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers
Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture
 Cooperative Extension Service
 Forest Service
 Soil Conservation Service
Department of Commerce
 Weather Bureau
Department of the Interior
 Bonneville Power Administration
 Bureau of Reclamation
 Fish and Wildlife Service
 Geological Survey
 Indian Service
 National Park Service
Department of National Defense
 Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company
Pacific Power and Light Company
Portland General Electric Company
The California Oregon Power Company

MUNICIPALITIES

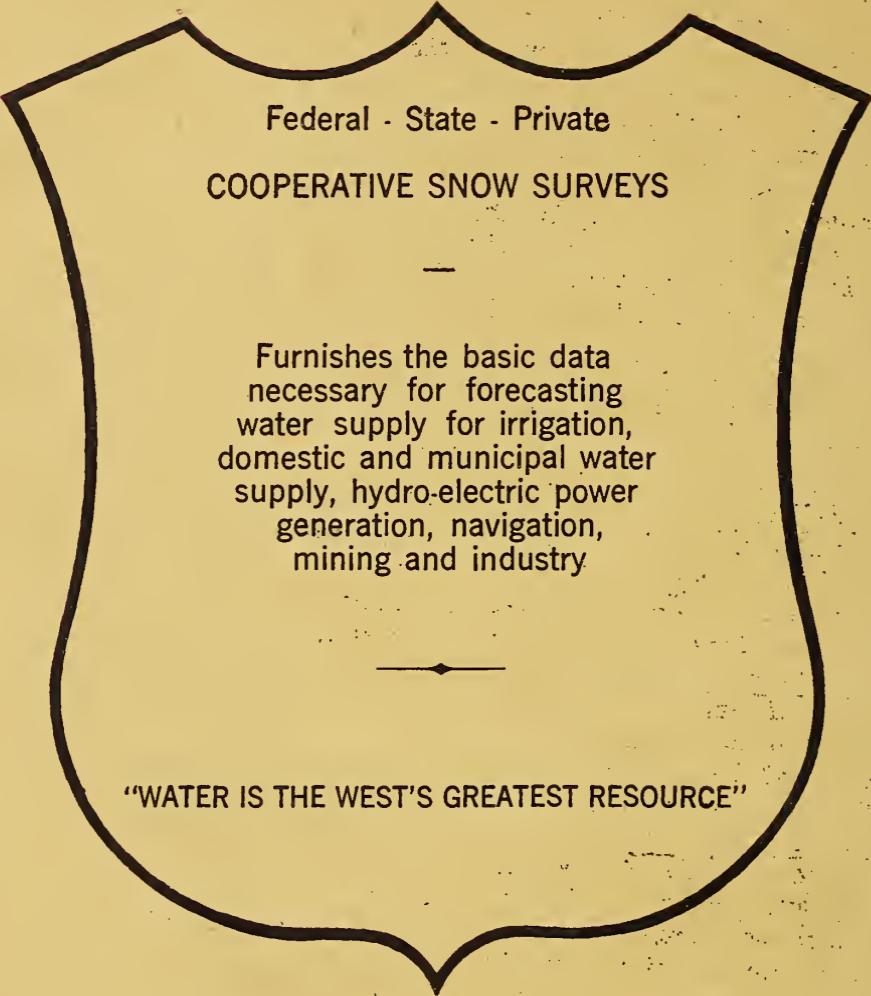
City of Baker
City of La Grande
City of The Dalles
City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users, Incorporated
Medford Irrigation District
North Board of Control - Owyhee Project
North Unit Irrigation District
Ochoco Irrigation District
Rogue River Irrigation District
South Board of Control - Owyhee Project
Talent Irrigation District
Vale-Oregon Irrigation District
Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
The Crag Rats, Hood River, Oregon



Federal - State - Private
COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"